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An integrated color-spatial approach to content-based image retrieval Wynne Hsu, S. T. Chua, H. H. Pung

January 1995 Proceedings of the third ACM international conference on Multimedia

Full text available: ntm(38 02 KB) Additional Information: full cliation, references, climps, index terms

Keywords: color retrieval, content-based retrieval, image segmentation, spatial retrieval

Fast image retrieval using color-spatial information

Beng Chin Ooi, Kian-Lee Tan, Tat Seng Chua, Wynne Hsu

May 1998 The VLDB Journal — The International Journal on Very Large Data Bases,

Volume 7 Issue 2

Full text available: (496.55 KB) Additional Information: full citation, abstract, index terms

In this paper, we present an image retrieval system that employs both the color and spatial information of images to facilitate the retrieval process. The basic unit used in our technique is a single-colored cluster, which bounds a homogeneous region of that color in an image. Two clusters from two images are similar if they are of the same color and overlap in the image space. The number of clusters that can be extracted from an image can be very large, and it affects the accuracy of ret ...

**Keywords:** Color-spatial information, Content-based retrieval, Sequenced multi-attribute tree, Single-colored cluster

Image Retrieval: Support vector machine active learning for image retrieval Simon Tong, Edward Chang October 2001 Proceedings of the ninth ACM international conference on Multimedia



Full text available: mpdf(1.57 MB)

Additional Information: full citation, abstract, references, citings, index

Relevance feedback is often a critical component when designing image databases. With these databases it is difficult to specify queries directly and explicitly. Relevance feedback interactively determinines a user's desired output or query concept by asking the user whether certain proposed images are relevant or not. For a relevance feedback algorithm to be effective, it must grasp a user's query concept accurately and quickly, while also only asking the user to label a small number of ...

Keywords: active learning, image retrieval, query concept, relevance feedback, support vector machines

Image Retrieval from the World Wide Web: Issues, Techniques, and Systems M. L. Kherfi, D. Ziou, A. Bernardi March 2004 ACM Computing Surveys (CSUR), Volume 36 Issue 1

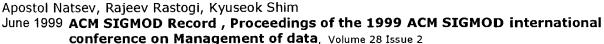


Full text available: (294.13 KB) Additional Information: full obtation, abstract, references, index terms

With the explosive growth of the World Wide Web, the public is gaining access to massive amounts of information. However, locating needed and relevant information remains a difficult task, whether the information is textual or visual. Text search engines have existed for some years now and have achieved a certain degree of success. However, despite the large number of images available on the Web, image search engines are still rare. In this article, we show that in order to allow people to profi ...

Keywords: Image-retrieval, World Wide Web, crawling, feature extraction and selection, indexing, relevance feedback, search, similarity

5 WALRUS: a similarity retrieval algorithm for image databases



Full text available: 📆 pof(1.63 MB)

Additional Information: full citation, abstract, references, citings, index terms

Traditional approaches for content-based image querying typically compute a single signature for each image based on color histograms, texture, wavelet tranforms etc., and return as the query result, images whose signatures are closest to the signature of the query image. Therefore, most traditional methods break down when images contain similar objects that are scaled differently or at different locations, or only certain regions of the image match. In this pape ...

6 Keyblock: an approach for content-based image retrieval Lei Zhu, Aidong Zhang, Aibing Rao, Rohini Srihari October 2000 Proceedings of the eighth ACM international conference on Multimedia



Additional Information: full citation, abstract, references, citings, index

We propose a new framework termed Keyblock for content-based image retrieval, which is a generalization of the text-based information retrieval technology in the image domain. In this framework, methods for extracting comprehensive image features are provided, which are based on the frequency of representative blocks, termed keyblocks, of the image database. Keyblocks, which are analogous to index terms in text document retrieval, can be constructed by exploiting the vector quantizatio ...

IRM: integrated region matching for image retrieval

Jia Li, James Z. Wang, Gio Wiederhold

October 2000 Proceedings of the eighth ACM international conference on Multimedia

Full text available: pdf(934.09 KB)

Additional Information: full citation, abstract, references, cilings, index terms

Content-based image retrieval using region segmentation has been an active research area. We present IRM (Integrated Region Matching), a novel similarity measure for region-based image similarity comparison. The targeted image retrieval systems represent an image by a set of regions, roughly corresponding to objects, which are characterized by features reflecting color, texture, shape, and location properties. The IRM measure for evaluating overall similarity between images incorporates prope ...

8 Theory of keyblock-based image retrieval



Full text available: pdf(2.14 MB)

Additional Information: full citation, abstract, references, index terms,

The success of text-based retrieval motivates us to investigate analogous techniques which can support the querying and browsing of image data. However, images differ significantly from text both syntactically and semantically in their mode of representing and expressing information. Thus, the generalization of information retrieval from the text domain to the image domain is non-trivial. This paper presents a framework for information retrieval in the image domain which supports content-based  ${\bf q}$  ...

Keywords: clustering, codebook, content-based image retrieval, keyblock

9 Posters and Short Papers: Subband image segmentation using VQ for content-based image retrieval



Junchul Chun, George Stockman

October 2001 Proceedings of the ninth ACM international conference on Multimedia

Full text available: pdf(1.07 MB)

Additional Information: full citation, abstract, references, index terms

Retrieving images from a large image dataset using image content as a key is an important issue. In this paper, we present a new content-based image retrieval approach using a Wavelet transform and subband image segmentation. For the image retrieval, we first decompose the image using a Wavelet transform and adopt vector a quantization(VQ) algorithm to perform automatic segmentation based on image features such as color and texture. The wavelet transform decomposes the image into 4 subbands(LL,L ...

**Keywords:** content-based retrieval, image segmentation, vector quantization, wavelet transform

10 On "shapes" of colors for content-based image retrieval
Renato O. Stehling, Mario A. Nascimento, Alexandre X. Falcão

November 2000 Proceedings of the 2000 ACM workshops on Multimedia

Full text available: 100 pdf(461.57 KB)

Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index</u> <u>terms</u>

Color is a commonly used feature for realizing content-based image retrieval (CBIR). Towards this goal, this paper presents a new approach for CBIR which is based on well known and widely used color histograms. Contrasting to previous approaches, such as using a single color histogram for the whole image, or local color histograms for a fixed number of image cells, the one we propose (named Color Shape) uses a variable number of histograms, depending only on the actual number of colors presen ...

Keywords: histograms, image databases, image metadata, image similarity retrieval

11 Technical session 15: WWW image retrieval: A bootstrapping framework for annotating and retrieving WWW images

Huamin Feng, Rui Shi, Tat-Seng Chua

October 2004 Proceedings of the 12th annual ACM international conference on

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	Туре	Hits	Search Text	DBs	Time Stamp Com Defi	Comments	Defi E	Error S Ref #	ef#
	BRS	4	wo-200045337-\$.did. wo-200046748-\$.did. wo-200065839-\$.did. wo- 200070881-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 14:19			S	S1
	BRS	0	(wo-200045337-\$.did. wo-200046748-\$.did. wo-200065839-\$.did. wo-200070881-\$.did.) and ((image near3 retriev\$3) with (color texture) same (percept\$6))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/05 16:28			S	S3
	BRS	0	(wo-200045337-\$.did. wo-200046748-\$.did. wo-200065839-\$.did. wo-200070881-\$.did.) and (image near3 retriev\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/05 16:28			S	S4
ĺ .	BRS	- ∞	((image near3 retriev\$3) with (color texture) same (percept\$6)) and @ad<"20010109"		2004/11/05 16:29			S	S5
	BRS	2	("6192150"   "6381365").PN.	USPAT	2004/11/05 16:36		,	S	98
	BRS	0_	"6624821".URPN.	USPAT	2004/11/05 16:37			S	25
	BRS	0	"200046748".URPN.	USPAT	2004/11/05 16:39			S	88
	BRS	23	murakawa-a.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/08 10:06			S	68
	IS&R	4	("6463432").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	2004/11/08 10:06			<u></u>	S10
0	BRS	13	tanaka-sumiyo.in.		2004/11/08 13:08			S	S11
-	BRS	13	tanaka-sumiyo.in. and @ad<"20010109"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/08 13:39			S	S12

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32	BRS	54	(texture with (fit\$4 generat\$3) with (wrap\$4 mirror\$3 tiling))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 12:41			538
33	BRS	31	S38 and @ad<"20010109"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 12:42			839
34	BRS	7954	(partition\$3 block\$3 divid\$3 grid) with ((circumscrib\$3 enclos\$3) near3 (rectangle block))		2004/11/10 14:21			S40
35	BRS	0	(partition\$3 divid\$3) with ((circumscrib\$3 enclos\$3) adj1 (rectangle)) with grid	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 15:25			S41
36	BRS	132	(partition\$3 divid\$3) with ((circumscrib\$3 enclos\$3) adj1 (rectangle))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 14:29			S42
37	BRS	0	S42 same texture	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 14:22			S43
38	BRS	0	S42 same grid	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 14:23			S44
39	BRS		S42 same map	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 14:32			S46
04	BRS	106	S42 and @ad<"20010109"	.;`	2004/11/10 15:35			S50
41	BRS	9780	(texture near3 (extract\$3 obtain\$3 acquir\$3 determin\$5 deriv\$3 calculat\$3 comput\$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 15:25			S51

	Туре	Hits	Search Text	DBs	Error Time Stamp ments nitio	Com Defi Error Ref #	i Errol	Ref #
42	BRS	1547	((circumscribing enclosing bounding) adj1 (rectangle block))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 15:27			S <b>5</b> 2
43	BRS	4	S51 same S52	3; USPAT; ; DERWENT;	2004/11/10 15:34	_		S53
4	BRS	42	S52 same grid	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/10 15:51			S54
54	BRS	27	S52 with grid		2004/11/10 15:35			S55
46	BRS	18	S55 and @ad<"20010109"	'	2004/11/12 10:54			S56
47	BRS	9	"740295".ap.		2004/11/10 15:49			S58
84	BRS	369	(weight\$3 with entropy)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/12 11:11			S59
49	BRS	+4	S59 with similarity		2004/11/12 10:56			260
20	BRS	23	S59 same (distance similarity)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/12 10:57			S61
21	BRS	<u> </u>	S61 and @ad<"20010109"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/12 11:11			S62

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	Search Text	DBs	Time Stamp	Error Com Defi Error Ref #	Error Ref	#
8/28	5120 348/582;707/6;382/164,165,190,195,257-260,279,305.cds.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	2004/11/15 11:55		S102	2